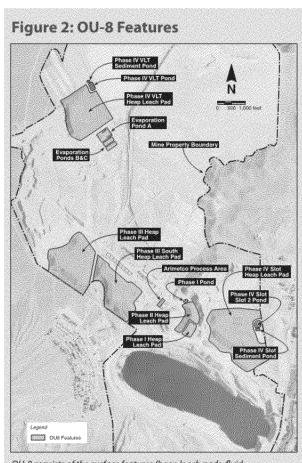


### The OU 8 Proposed Plan





OU-8 consists of the surface features (heap leach pads, fluid management ponds and conveyance channels), and shallow zone soils in the process areas associated with the former Arimetco Operations.

#### The Problem...

- Acidic draindown fluids containing elevated total dissolved salts (TDS) and metals.
- The fluid management ponds are expected to reach capacity in two to four years, depending on weather.
- O&M is expensive with aged infrastructure.
- Repeatedly constructing new evaporation ponds is not a sustainable, fiscally responsible longterm remedy.

### The OU 8 Proposed Plan



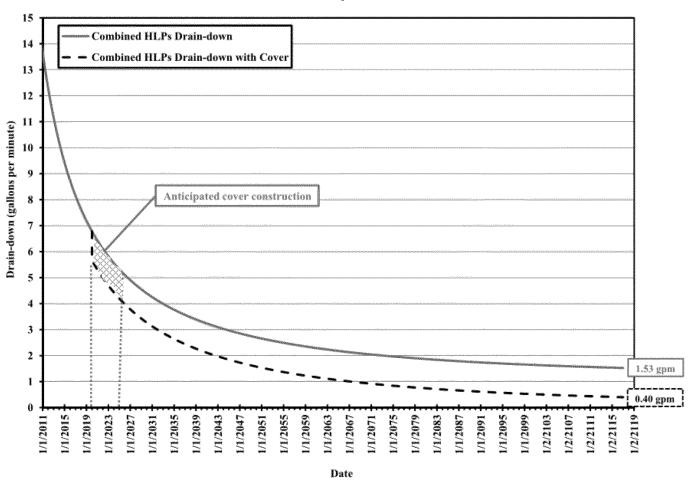
#### The Solution ... a quick refresher

- 1. Regrading and capping all surfaces of the HLPs, including side slopes, with a soil cap, to further minimize precipitation infiltration
- 2. Closure and conversion of ponds to e-cells for ponds not needed to manage residual draindown fluids and precipitates
- 3. Installation of stormwater routing and storage features including piping, open channels, and stormwater basins
- 4. Continuation of active management and evaporation of fluids
- Storm Water Management develop peripheral stormwater management system to be integrated into the site wide stormwater management system – stormwater management will provide separation from draindown fluid management

## Potential Reduction in OU 8 HLP Draindown with and without Soil Covers

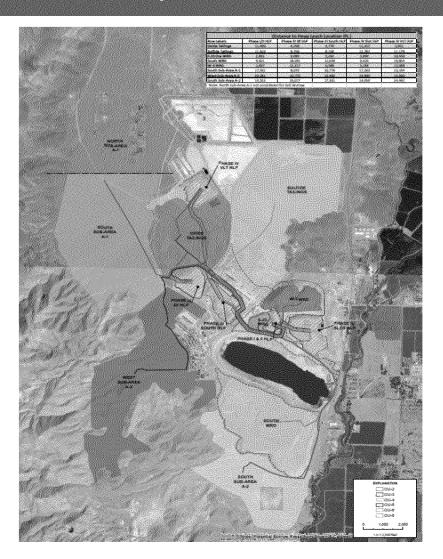


Arimetco HLPs Drain-down Projection with and without Cover



## Potential Opportunity to Expand Closure Efficiency in OU 8 Proposed Plan Borrow Sources

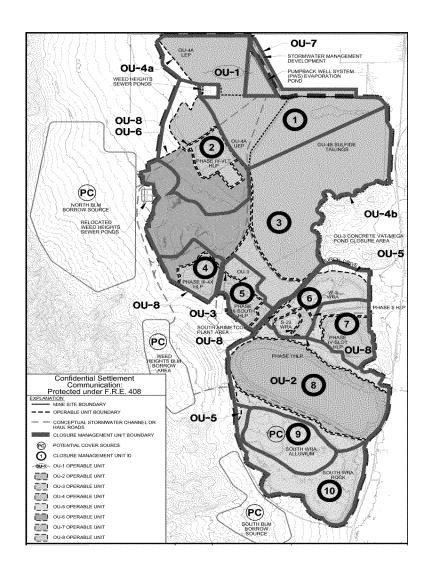




- Conceptual Borrow Sources could include suitable materials from OU 4b, OU 5, OU 6 and offsite borrow areas adjacent to mine
- Borrow areas would require reclamation at conclusion of OU 8 Implementation as part of the closure
- Presents an opportunity to integrate and expand the closure to include the borrow materials and areas along with OU 8 closure
- Additional expansion opportunity to efficiently close the entire site in a continuous RA effort with the potential to condense the schedule

## Conceptual Site Closure Management Units (CMUs) Organization of OUs and CMUs

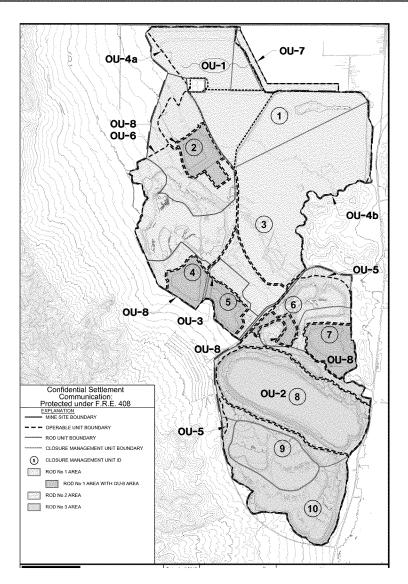




Closure Management Unit (CMU)	Operable Unit (OU)	
CMU 1	OU 1, OU 4 (4a and 4b), OU 6, OU 7	
CMU 2	OU 4a, OU 6, OU 8 (Phase IV VLT)	
CMU 3	OU 3, 4a (Calcine ditch), 4b, OU 6	
CMU 4	OU 6, OU 8 (Phase III-4X)	
CMU 5	OU 3, OU 8 (Phase III-South)	
CMU 6	OU 5, OU 8 (Phase I/II HLP and Plant)	
CMU 7	OU 5, OU 8 (Phase IV Slot HLP)	
CMU 8	OU 2	
CMU 9	OU 5 (Alluvium)	
CMU 10	OU 5 (Rock)	

## Conceptual Grouping of CMUs into RODS





Record of Decision (ROD)	Operating Unit (OU)	Closure Management Unit (CMU)
ROD 1	OU 4a, OU 6, OU 8	CMU 2
	OU 6, OU 8	CMU 4
	OU 3, OU 8	CMU 5
	OU 5, OU 8	CMU 6
	OU 5, OU 8	CMU 7
ROD 2	OU1, OU 4 (4a and 4b), OU 6 OU7	CMU 1
	OU 3, 4a (Calcine ditch), 4b, OU 6	CMU 3
ROD 3	OU 2	CMU 8
	OU 5 (Alluvium)	CMU 9
	OU 5 (Rock)	CMU 10

## Summary of CMU Conceptual Benefits and Approach



#### □ Benefits

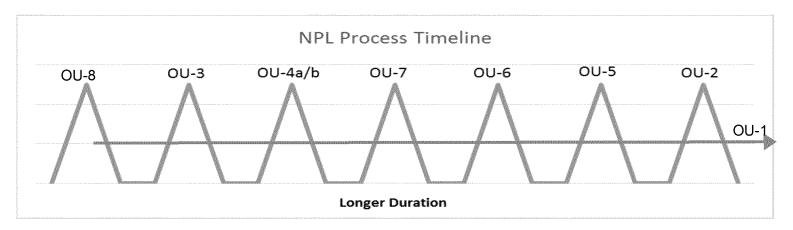
- Feasibility of Construction
- Efficiency of Design, Material use and Construction Implementation
- Improved RA Implementation Schedule
- Cover and Fill Flexibility
- Improved Safety
- Long-Term Effectiveness and Sustainability

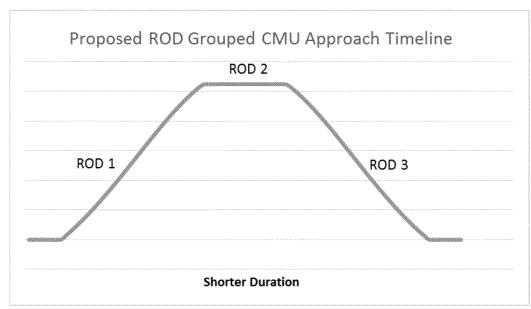
#### Approach

- Flexible closure units not constrained by OU boundaries
- Redefine Operating Units by waste/material type as Closure Management Units
  - materials and construction are coordinated to attain efficient closure objectives
- Efficiency and Worker Safety benefit from an uninterrupted construction implementation phase

# Potential Site-wide Closure Progression Efficiency







- Organize closure to optimize construction effort into Closure Management Units (CMU)
- Group CMUs into three RODs to optimize and streamline site wide RA efforts

## Remedial Investigation Progression



- □ RI work will be completed at the OU level going forward
- RIs will be completed for each OU at the site except OU 8 (already completed)
- □ RI work is nearly complete for OUs 1, 3, 4a, and portions of OU-7.
- □ Peripheral areas of OUs 3, 5, 6 involved in ROD1 design will be characterized as part of predesign. Characterization data will be fed back to the RI evaluation
- ☐ One RI report is anticipated to encompass OUs 2, 4b, 5 and 6.
  - Focused additional characterization is anticipated for these large homogeneous features.

## Feasibility Study Progression



- □ ARC will aggregate OUs together at the FS stage (see ROD-CMU-OU Crosswalk)
- ROD 1
  - Areas of OUs (adjacent to OU 8) to be included in ROD 1 will be investigated in predesign phase
  - Areas of OUs not included in ROD 1 will proceed through ROD 2 RI/FS process
- ROD 2 FS contemplates CMUs 1, 3, and groundwater, and portions of OUs 1, 3, 4a, 4b, 6 and 7 in the northern portion of the site
  - The FS for groundwater will need to assess alternatives for stability, exposure, and impracticability of capture/ treatment
  - ARC will prepare an FS under the interim AOC
- ROD 3 FS contemplates CMUs 8, 9 and 10 and portions of 2 and 5 in the southern portion of the site
  - ARC will prepare this FS under the interim AOC

## Proposed Site-Wide Closure Schedule



Task	<b>Target Completion Date</b>
Initiate Combined RI including Risk Assessment (OU-2, 4b, 5, and 6)	Q2 2018
Complete ROD1 Remedial Design	Q4 2019
Initiate ROD1 Remedial Construction	Q4 2019
Complete All RI activities including Risk Assessment	H2 2020
Complete Feasibility Study (FS) for Groundwater and Northern OUs (OU-1, 3, 4, 6, 7, and a portion of OU-5)	2021
Complete FS for Pit Lake and Southern OUs (OU-2 and portions of OU-5)	- 2022
Issue ROD2 for Groundwater and Northern OUs (OU-1, 3, 4, 6, 7, and a portion of OU-5)	2023
Issue ROD3 for Pit Lake and Southern OUs (OU-2 and portions of OU-5)	2024
Complete ROD1 Remedial Action	2024
Complete ROD2 RD/RA	2028
Complete ROD3 RD/RA	2029
Site-Wide Remedial Action Completion	2029

## Questions and Discussion

